What is Claimed is:

1. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of specific binding assays comprising adding an effective amount of a large polycation to serum or plasma containing assay samples during the specific binding assay.

2. The method of claim 1 wherein the large polycation has a molecular weight of 3,000 daltons or greater.

3. The method of claim 1 wherein the large polycation is a polylysine, polyornithine, polybrene or MERQUAT.

4. The method of claim 3 wherein the large polycation comprises a polylysine with a molecular weight ranging between 5,200 and 11,200 daltons.

5. The method of claim 4 wherein the large polycation comprises polylysine with a molecular weight of 8,800 daltons.

6. The method of claim 1 wherein the specific binding assay measures thyroid stimulating hormone, free prostate specific antigen, alpha fetal protein,, Hepatitis B core antibody, Hepatitis B surface antibody or human immunodeficiency virus.

7. The method of claim 1 wherein said specific binding assay is performed on a solid phase.

8. The method of claim 7 wherein said solid phase comprises paramagnetic microparticles.

9. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a thyroid stimulating hormone

specific binding assay comprising adding a large polycation to serum or plasma containing assay samples during the thyroid stimulating hormone specific binding assay.

10. The method of claim 9 wherein the large polycation has a molecular weight of 3,000 daltons or greater.

11. The method of claim 9 wherein the large polycation is a polylysine, polybrene or MERQUAT.

12. The method of claim 11 wherein the large polycation comprises a polylysine with a molecular weight ranging between 5,200 and 11,200 daltons.

13. The method of claim 12 wherein the large polycation comprises polylysine with a molecular weight of 8,800 daltons.

14. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a thyroid stimulating hormone specific binding assay comprising:

a) forming a first complex by incubating a serum or plasma sample with paramagnetic microparticles coated with anti-β TSH antibody and an assay diluent which comprises a large polycation, for a time and under conditions which allow the thyroid stimulating hormone present in the sample to bind to the anti-β TSH antibody coated microparticles;

(b) forming a second complex by incubating the first complex with an acridinium labeled conjugate comprising an anti-α TSH antibody, for a time and under conditions which allow the conjugate to bind to the first complex;

(c) creating a chemiluminescent reaction in the second complex; and

(d) measuring the chemiluminescent reaction as relative light units wherein the amount of thyroid stimulating hormone in the plasma or serum sample is directly related to the measured relative light units.

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15. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a free prostate specific antigen specific binding assay comprising adding a large polycation to serum or plasma containing assay samples during the free prostate specific antigen specific binding assay.

16. The method of claim 15 wherein the large polycation is a polylysine or polyornithine.

17. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a free prostate specific antigen specific binding assay comprising:

(a) forming a first complex by incubating a serum or plasma sample with paramagnetic microparticles coated with an antibody specific for free PSA, for a time and under conditions which allow the free PSA present in the sample to bind to the antibody coated microparticles;

(b) forming a second complex by incubating the first complex with an acridinium labeled conjugate comprising an anti-PSA antibody, for a time and under conditions which allow the conjugate to bind to the first complex;

(c) creating a chemiluminescent reaction in the second complex; and

(d) measuring the chemiluminescent reaction as relative light units wherein the amount of prostate specific antigen in the plasma or serum sample is directly related to the measured relative light units.

18. An improved specific binding assay kit for plasma and serum samples comprising a solution containing a large polycation.

19. The improved specific binding assay kit of claim 18 wherein the large polycation has a molecular weight of 3,000 daltons or greater.

20. The improved specific binding assay kit of claim 15 wherein the large polycation is a polylysine, polybrene or MERQUAT.

21. The improved specific binding assay kit of claim 18 wherein the specific binding assay measures thyroid stimulating hormone, free prostate specific antigen, alpha fetal protein, Hepatitis B core antibody, Hepatitis B surface antibody or human immunodeficiency virus.

22. An improved kit for detection of thyroid stimulating hormone comprising:

(a) mouse, monoclonal anti-β TSH coated microparticles;

(b) mouse, monoclonal anti-α TSH acridinium-labeled conjugate; and

(c) a modified TSH assay diluent comprising a large polycation.

23. The kit of claim 19 wherein the large polycation is a polylysine having a molecular weight from 5,200 to 11,200 daltons.

24. An improved kit for detection of free prostate specific antigen comprising:

(a) mouse, monoclonal anti-Free PSA coated microparticles in a diluent comprising a large polycation;

(b) (b) mouse, monoclonal anti- PSA acridinium-labeled conjugate;

25. The kit of claim 24 wherein the large polycation is a polylysine or polyornithine.

26. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a total prostate specific antigen specific binding assay comprising:

(a) forming a first complex by incubating a serum or plasma sample with paramagnetic microparticles coated with an antibody which binds both free and complexed PSA, for a time and under conditions which allow the PSA present in the sample to bind to the antibody coated microparticles;

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(b) forming a second complex by incubating the first complex with an acridinium labeled conjugate comprising an anti-PSA antibody, for a time and under conditions which allow the conjugate to bind to the first complex;

(c) creating a chemiluminescent reaction in the second complex; and

(d) measuring the chemiluminescent reaction as relative light units wherein the amount of prostate specific antigen in the plasma or serum sample is directly related to the measured relative light units.